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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,664	12/14/2000	Koji Sahashi	100725-00026	7133

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EXAMINER

BINDA, GREGORY JOHN

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 10/04/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,664

Applicant(s)

Sahashi et al

Examiner

Greg Binda

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 20, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above, claim(s) 1-8, 16, and 19-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-15, 17, and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Aug 20, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 13 6) ☐ Other:

Art Unit: 3629

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restriction

2. Applicant's election without traverse of Species III in Paper No. 8 is acknowledged.
3. Claims 1-8, 16 & 19-38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

Drawings

4. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on Aug 20, 2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 U.S.C. § 112

5. Claims 10-12, 15 & 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3629

a. There is insufficient antecedent basis for the limitation, “the outer joint ring of said fixed type constant velocity universal joint” in claim 10, line 2; claim 11, line 9; claim 12, line 2; claim 15, line 4+ and claim 17, lines 3+.

b. There is insufficient antecedent basis for the limitation ‘said mouse portion’ in claim 11, line 13.

Claim Rejections - 35 U.S.C. § 102

6. Claims 9 & 13 are rejected under 35 U.S.C. 102(b) as being anticipated by GKN. GKN shows on page 16 (see the third embodiment from the top in Fig. B) a drive wheel bearing assembly having an outboard (because it is shown furthest from the center of the page) fixed type constant velocity universal joint (“FIXED JOINT”) coupled to a wheel bearing (see picture above Fig. B), mounted to one end portion of an intermediate shaft; an inboard (see also “inboard joint” on page 12) sliding type constant velocity universal joint (“DOUBLE OFFSET JOINT”) coupled to a differential (see “transmission side” on page 12 and the picture above Fig. B), mounted to the other end portion of the intermediate shaft; and a seal boot mounted on the other end of the intermediate shaft. On page 12, GKN discloses that the allowable plunging down to the bottom portion of the outer joint ring of the sliding type joint is 55 mm. On page 7, GKN shows that the width of the inner joint ring of the fixed type joint is no greater than the diameter of the shaft which is between 24 and 30 mm. Therefore the allowable plunge (55 mm) of the sliding joint is at

Art Unit: 3629

least equal to the width (a value no greater than 24 to 30 mm) of the inner ring of the fixed joint at a minimum operative angle of the sliding type constant velocity universal joint.

Claim Rejections - 35 U.S.C. § 103

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over GKN in view of Mizukoshi et al, US 5,975,767, (Mizukoshi). GKN shows all the limitations of the claim except a hollow portion between the stem and bell portions of the fixed joint. In col. 13, lines 18-21, Mizukoshi teaches making a hollow portion between the stem and bell portions of a fixed joint in order to provide a lightweight joint. It would have been obvious to one of ordinary skill in the art to modify the drive wheel assembly of GKN by making the fixed joint with a hollow portion between its stem and bell portions in order to provide a lightweight joint as taught by Mizukoshi.

8. Claims 12, 15, 17 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over GKN in view of Fukumura, US 5,607,241. GKN shows all the limitations of the claims except the wheel bearing plastically connected to the fixed joint and bearing races on a hub ring, a separate ring and directly on the fixed joint. In Figs. 1 & 2 Fukumura shows a drive wheel bearing assembly comprising a wheel bearing 3 plastically connected (as at weld 5) to a fixed joint 1 and bearing races 7 on a hub ring 3, a separate ring 13 (in Fig. 2) and directly on the fixed joint 1 (in Fig. 1). In col. 2, lines 6-10, Fukumura teaches making a drive wheel bearing assembly in this way in order to provide a small compact wheel bearing assembly which can be assembled

Art Unit: 3629

easily while keeping a high reliability of connection. It would have been obvious to one of ordinary skill in the art to modify the drive wheel bearing assembly of GKN by making the wheel bearing plastically connected to the fixed joint and bearing races on a hub ring, a separate ring and directly on the fixed joint in order to provide a small compact wheel bearing assembly which can be assembled easily while keeping a high reliability of connection as taught by Fukumura.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over GKN in view of Misumi et al, US 5,230,936 (Misumi). GKN shows all the limitations of the claim but does not expressly disclose the seal boot as formed from resin. In col. 4, lines 18-20, Misumi teaches forming a seal boot with resin in order to improve the boot's resistance to abrasion. It would have been obvious to one of ordinary skill in the art to modify the drive wheel assembly of GKN by making the seal boot with resin in order to improve the boot's resistance to abrasion as taught by Misumi.

Allowable Subject Matter

10. Claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Art Unit: 3629

Response to Arguments

11. Applicant's arguments filed Aug 20, 2002 have been fully considered but they are not persuasive.

a. Applicant argues that in GKN the allowable plunge is actually about two times greater than the width of the inner ring and so therefore is not at least equal to the width. However, the term "at least equal" indicates that the lower limit of the range of values for allowable plunge is the equal to the width of the inner ring. Therefore, if written in mathematical terms, the claimed relationship of allowable plunge (P) to inner ring width (w_{ir}) is: $P \geq w_{ir}$. Since, as applicant freely admits, $P = 2w_{ir}$, and $2w_{ir} \geq w_{ir}$, the claim limitation is fully anticipated.

b. In response to applicant's arguments with regard to the 103 rejections against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 3629

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached Tuesday through Friday from 9:30 am to 7:00 pm. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne, can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 (before final), (703) 872-9327 (after final) and (703) 872-9325 (customer service).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.



Greg Binda
Patent Examiner